

OIB - C-130H Hercules #439 04/13/15 Science Report

Aircraft:

[C-130H Hercules #439](#) ([See full schedule](#))

Date:

Monday, April 13, 2015

Mission:

OIB

Mission Location:

Kanger

Mission Summary:

Mission: Southeast Coastal (priority: high)

This mission refies a 20-km coast-parallel grid along the southeast Greenland coast, enabling direct measurement of dh/dt in the catchment areas of the many major glaciers in the area across a range of surface elevations. It also covers the two central branches of the Ikertivaq Glaciers. The Ikertivaq centerlines are new for 2015. We did not fly the Fridtjof Nansen centerline since we covered this one last week.

We faced a very dynamic weather situation this morning, with southern Greenland sandwiched between two strong and fast-moving low-pressure systems. The persistent "Iceland Low" was situated in the Denmark Strait close to the Greenland coast, and moving northward quickly. Another low-pressure system was moving into southwestern Greenland from the Davis Strait. This yielded a situation where the morning weather satellite images showed poor weather in the southeast but good weather in the southwest. We were confident in the weather models which consistently predicted a quick reversal of that synoptic situation, however, so we chose to fly to the southeast. This turned out to be a good choice. We encountered a few clouds in the far northern portion of the southeastern survey lines, but these quickly cleared and we worked under clear skies all day thereafter, except for the far western flank of the ice sheet late in the day.

All sensors operated normally today, with no significant problems. We again saw quite minor radio-frequency interference with ATM3 (wide scanner), but none anywhere else. The "interference" previously seen on MCoRDS turned out to be a digital artifact introduced during post-processing, and is not expected to be a further problem.

We flew a ramp pass, for instrument calibration purposes, at 2000' AGL.

Data volumes:

ATM: 25 Gb

CAMBOT: 88 Gb

DMS: 131 Gb

Ku-Band Radar: 194 Gb

MCoRDS: 2.7 Tb

Narrow Swath ATM: 33 Gb

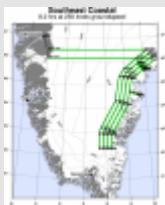
NSERC Onboard Data: TBD

Snow Radar: 194 Gb

total data collection time: 7.1 hrs

Images:

Map of Southeast Coastal



[Read more](#)

Cargo bay of NASA-439



[Read more](#)

Submitted by:

John Sonntag on 04/13/15

Related Flight Report:

C-130H Hercules #439 04/13/15

Flight Number:

Southeast Coastal

Payload Configuration:

OIB

Nav Data Collected:

No

Total Flight Time:

7.7 hours

Submitted by:

Luci Crittenden on 04/13/15

Flight Segments:

| | | | |
|---------------------------|--|----------------|-------------------|
| From: | BGSF | To: | BGSF |
| Start: | 04/13/15 10:28 Z | Finish: | 04/13/15 18:12 Z |
| Flight Time: | 7.7 hours | | |
| Log Number: | 151002 | PI: | Michael Studinger |
| Funding Source: | Bruce Tagg - NASA - SMD - ESD Airborne Science Program | | |
| Purpose of Flight: | Science | | |
| Comments: | Successful completion of another high priority IceBridge mission today | | |

Flight Hour Summary:

| | |
|---------------------------------------|---------------|
| | 151002 |
| Flight Hours Approved in SOFRS | 334.4 |
| Total Used | 297.6 |
| Total Remaining | 36.8 |

151002 Flight Reports

| Date | Flt # | Purpose of Flight | Duration | Running Total | Hours Remaining |
|-------------------------------------|-------------------------------------|-------------------|----------|---------------|-----------------|
| 03/12/15 | ATF | Check | 1.5 | 1.5 | 332.9 |
| 03/13/15 | PTF - GPS | Check | 2 | 3.5 | 330.9 |
| 03/13/15 | PTF - Radar #1 | Check | 0.8 | 4.3 | 330.1 |
| 03/13/15 - 03/14/15 | PTF - Radar #2 | Check | 4.5 | 8.8 | 325.6 |
| 03/16/15 | PTF - Radar #3 | Check | 2.4 | 11.2 | 323.2 |
| 03/17/15 | Transit | Transit | 7.8 | 19 | 315.4 |
| 03/19/15 | Nansen Gap | Science | 7.4 | 26.4 | 308 |
| 03/24/15 | Sea Ice - Zigzag East | Science | 8.2 | 34.6 | 299.8 |
| 03/25/15 | Sea Ice North Pole Transect ? Thule | Science | 8.2 | 42.8 | 291.6 |
| 03/26/15 | Sea Ice - Laxon Line | Science | 9.2 | 52 | 282.4 |
| 03/27/15 - 03/28/15 | Sea Ice - East Beaufort Sea | Science | 8.2 | 60.2 | 274.2 |
| 03/29/15 - 03/30/15 | Sea Ice - North Beaufort Loop | Science | 8.9 | 69.1 | 265.3 |

| | | | | | |
|-------------------------------------|----------------------------------|---------|-----|-------|-------|
| 03/30/15 - 03/31/15 | Sea Ice - SIZRS Zigzag | Science | 8.1 | 77.2 | 257.2 |
| 04/01/15 | Sea Ice - South Basin Transect | Science | 8.8 | 86 | 248.4 |
| 04/03/15 | Sea Ice - South Canada Basin | Science | 7.4 | 93.4 | 241 |
| 04/06/15 | OIB Transit from BGTL-BGSF | Transit | 3.3 | 96.7 | 237.7 |
| 04/08/15 | Helheim-Kangerdlussuag | Science | 8 | 104.7 | 229.7 |
| 04/09/15 | K-EGIG Summit | Science | 8.3 | 113 | 221.4 |
| 04/10/15 | Southeast Glaciers 01 | Science | 8 | 121 | 213.4 |
| 04/11/15 | East Glaciers 01 | Science | 8 | 129 | 205.4 |
| 04/13/15 | Southeast Coastal | Science | 7.7 | 136.7 | 197.7 |
| 04/14/15 | Helheim-Kangerdlussuag Gap B | Science | 7.9 | 144.6 | 189.8 |
| 04/17/15 | Umanaq B | Science | 7.5 | 152.1 | 182.3 |
| 04/18/15 | Southwest Coast A | Science | 8.1 | 160.2 | 174.2 |
| 04/20/15 | Penny 01 | Science | 6.3 | 166.5 | 167.9 |
| 04/21/15 | Thomas-Jakobshaven 01 | Science | 8.7 | 175.2 | 159.2 |
| 04/22/15 | Southeast Flank 01 | Science | 7.6 | 182.8 | 151.6 |
| 04/23/15 | Jakobshavn-Eqip-Store | Science | 9.2 | 192 | 142.4 |
| 04/24/15 | Geikie 02 | Science | 8.3 | 200.3 | 134.1 |
| 04/25/15 | Jakobshaven 02/ Mop Up | Science | 6.9 | 207.2 | 127.2 |
| 04/27/15 | Southwest Coastal B | Science | 8 | 215.2 | 119.2 |
| 04/28/15 | Southeast Glaciers 02 | Science | 7 | 222.2 | 112.2 |
| 04/29/15 | TRANSIT BGSF-BGTL | Transit | 2.5 | 224.7 | 109.7 |
| 04/30/15 | ATM Laser Repair Checkout | Science | 2.3 | 227 | 107.4 |
| 05/01/15 | NW Coastal A | Science | 7.2 | 234.2 | 100.2 |
| 05/05/15 | IceSat-2 North / CryoSat-2 SARIn | Science | 8.2 | 242.4 | 92 |
| 05/06/15 | North Glaciers 01 | Science | 8.2 | 250.6 | 83.8 |
| 05/07/15 | Devon-Barnes 01 | Science | 7.8 | 258.4 | 76 |
| 05/08/15 | Zigzag West | Science | 7.2 | 265.6 | 68.8 |
| 05/11/15 | Northwest Glaciers 01 | Science | 7.8 | 273.4 | 61 |
| 05/12/15 | North-Central Gap 02 | Science | 8.1 | 281.5 | 52.9 |
| 05/15/15 | North-Central Gap 01 | Science | 7.3 | 288.8 | 45.6 |
| 05/21/15 | Transit - Thule to Bangor, ME | Transit | 6.5 | 295.3 | 39.1 |
| 05/22/15 | Transit - Bangor, ME to WFF | Transit | 2.3 | 297.6 | 36.8 |

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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